IPQ Nurse Training

The Renal System, Acute Kidney Injury and Renal Replacement Therapy

Workplace competency record: renal monitoring, recognising and managing AKI, hyperkalaemia and care of the patient on renal replacement therapy

Version 1.0, October 2026. Review due October 2027.

Complete this record alongside The Renal System, Acute Kidney Injury and Renal Replacement Therapy e-learning, during supervised practice in your own clinical area. It covers renal monitoring and fluid assessment, recognising and staging acute kidney injury, managing it, hyperkalaemia, and nursing care of the patient receiving renal replacement therapy. It does not cover vascular access insertion, prescribing, peritoneal dialysis exchanges, or the independent management of a renal replacement circuit, each of which requires separate training and sign-off.

Step 1	Step 2	Step 3	Then
E-learning passed	**Supervised practice and assessment**	**Independent practice**	**Reassessment at your employer's interval**

How this course works

This course has no classroom session. Competence is built and assessed where you work, with a competent practitioner. Sign-off in section 10 is what authorises independent practice, within your employer's policy.

Before you begin section 5

Section 5 covers nursing care of a patient receiving renal replacement therapy. It is completed only by practitioners working in a setting that delivers it and whose employer has authorised them to care for these patients. If that is not your setting, leave section 5 blank and your assessor signs the record for sections 1 to 4 and 6 only. Recognising that a patient needs renal replacement therapy is in section 4, and is expected of everyone.

Practitioner and assessment details

Name		**Job title and band**	
NMC PIN		**Ward or department**	
Organisation		**Named assessor**	
Date e-learning passed		**Does your setting deliver RRT? (Y/N)**	

Before you start

Requirement	Date	Confirmed by
E-learning completed and final assessment passed at 16 of 20 or above (certificate seen)		

Requirement	Date	Confirmed by
Local policies read: AKI recognition and response, fluid balance and weighing, hyperkalaemia, sepsis, medicines to withhold in acute illness		
Knows this organisation's AKI alert or flag system and who receives it		
Knows the local escalation route for AKI, for hyperkalaemia and for renal advice, and the hours each runs		
Knows where a bladder scanner is and is trained to use it, or knows who is		
Understands that passing the e-learning does not authorise any change to a prescription		

How this record is completed

Your assessor observes you in practice and marks each criterion on the scale below. Up to three observed occasions are recorded in columns 1, 2 and 3. Every criterion must reach level I before that section is signed off.

	Level	What it means
N	**Not yet demonstrated**	Step omitted, performed unsafely, or not explained when asked
P	**With prompting**	Performed correctly but needed a cue, a reminder or a question to prompt the next step
I	**Independently**	Performed correctly, in the right order, without prompting, and able to explain why

Safety-critical criteria

Criteria marked * are absolute. If one of these is not met, the occasion stops there, is recorded as N, and is repeated after further teaching. These are the steps where getting it wrong causes avoidable harm.

Section 1. Renal monitoring and fluid assessment

Observed on a patient at risk of, or with, acute kidney injury.

Criterion	1	2	3	Date and assessor initials
1. Maintains an accurate fluid balance chart: every input and every output recorded, totalled at the agreed times, and a running balance that is actually calculated rather than left blank *				
2. Weighs the patient daily, at the same time, on the same scales, and recognises that a sudden weight change is fluid, not tissue *				
3. Measures and records urine output hourly where indicated, and calculates it in mL/kg/h rather than reporting a raw volume				
4. Recognises oliguria (less than 0.5 mL/kg/h) and acts on it rather than waiting for the next round of observations *				
5. Performs a full fluid assessment: pulse, blood pressure including postural drop, capillary refill, mucous membranes, skin turgor, JVP, peripheral and sacral oedema, chest findings, and the trend in all of them				
6. Distinguishes hypovolaemia from fluid overload, and recognises that a patient can be both intravascularly depleted and oedematous				
7. Interprets the renal profile: urea, creatinine, eGFR, sodium, potassium, bicarbonate, and compares each against the patient's own baseline rather than the laboratory reference range				
8. Recognises that creatinine rises late, and that a normal creatinine in a frail or low muscle mass patient can conceal significant renal impairment				
9. Performs or arranges urinalysis and interprets the result, and knows when a sample should go for culture				
10. Checks for urinary retention by history, examination and bladder scan where available, and escalates a significant residual volume				
11. Ensures fluids prescribed are actually given, at the rate prescribed, and escalates when they are not				
12. Documents the assessment, the trend and the action taken, contemporaneously				

Assessor note

A fluid balance chart that is incomplete is worse than no chart, because decisions get made on it. If the practitioner cannot say what the patient's balance is over the last 24 hours and the last 72 hours, this section is not at level I.

Section 2. Recognising and staging acute kidney injury

Criterion	1	2	3	Date and assessor initials
1. States the three criteria by which AKI is defined: a rise in creatinine against baseline, a rise within 48 hours, and a fall in urine output over time				
2. Stages AKI correctly against local or KDIGO criteria, using both the creatinine and the urine output limbs, and takes the higher of the two *				
3. Identifies the patient's baseline creatinine, and knows what to do when no baseline is available				
4. Classifies the likely cause as pre-renal, intrinsic renal or post-renal, and explains what in this patient points that way				
5. Names the common pre-renal causes: hypovolaemia, sepsis, cardiac failure, hypotension, and any cause of reduced renal perfusion				
6. Names the common intrinsic causes, including acute tubular necrosis, nephrotoxic injury, glomerular and interstitial disease				
7. Considers and actively excludes obstruction in every patient with AKI, because it is the cause that is reversible within hours and is the one most often missed *				
8. Identifies the patients at highest risk before they deteriorate: age, chronic kidney disease, heart failure, diabetes, liver disease, sepsis, hypovolaemia, recent surgery, contrast and nephrotoxic drugs				
9. Recognises the AKI alert or flag in this organisation's system and acts on it rather than filing it				
10. Recognises AKI as a marker of serious illness rather than an isolated blood result, and assesses the whole patient for the cause *				
11. Documents the stage, the suspected cause and the action taken				

Section 3. Managing acute kidney injury

Observed on a patient with new or deteriorating AKI.

Criterion	1	2	3	Date and assessor initials
1. Works through a structured approach to AKI management and can name each element: treat sepsis and restore perfusion, stop or avoid toxins, optimise fluid status and blood pressure, and prevent further harm				
2. Screens for and escalates sepsis immediately where it is suspected, and does not treat the AKI in isolation from the cause *				
3. Reviews the drug chart for nephrotoxic and accumulating medicines and flags each one for medical review, naming at least four: NSAIDs, ACE inhibitors and ARBs, diuretics, aminoglycosides, metformin, and iodinated contrast				
4. Does not administer an NSAID to a patient with AKI or at risk of it, and challenges the prescription rather than giving the dose *				
5. Knows what sick day guidance means, which medicines it applies to, and who makes the decision to withhold or restart				
6. Optimises fluid status to the plan: gives the prescribed fluid, reassesses, and escalates when the response is inadequate or when the patient becomes overloaded				
7. Recognises fluid overload developing during resuscitation, stops and escalates rather than continuing to the end of the bag *				
8. Monitors and escalates the blood pressure to the target set for this patient				
9. Catheterises or escalates for catheterisation where obstruction is suspected or accurate output is needed, within their own scope				
10. Recognises when contrast is planned and ensures the risk is flagged before the scan, not afterwards				
11. Recognises the indications for urgent renal referral or renal replacement: refractory hyperkalaemia, refractory fluid overload or pulmonary oedema, severe metabolic acidosis, uraemic complications, and certain poisonings *				
12. Supports the patient's nutrition and skin, and recognises that AKI patients are at high risk of pressure damage and malnutrition				
13. Documents the plan, the response and the ongoing monitoring				

Section 4. Hyperkalaemia

The emergency in this course. Observed, or assessed by direct questioning if no episode occurs.

Criterion	1	2	3	Date and assessor initials
1. Recognises hyperkalaemia from the blood result and states the local thresholds for mild, moderate and severe *				
2. Treats a potassium above the local urgent threshold as a medical emergency and escalates immediately, without waiting for a repeat sample *				
3. Obtains a 12-lead ECG without delay and does not wait for one to be requested *				
4. Recognises the ECG changes of hyperkalaemia in sequence: tall tented T waves, flattening and loss of the P wave, widening of the QRS, and the sine wave pattern that precedes arrest				
5. States that the absence of ECG changes does not make a high potassium safe				
6. Considers and states whether the sample could be falsely raised by haemolysis or a difficult draw, and knows that a repeat must not delay treatment of a symptomatic or ECG-positive patient				
7. States the purpose of each element of treatment: a calcium salt to stabilise the myocardium, insulin with glucose and nebulised salbutamol to shift potassium into cells, and a binder or dialysis to remove it from the body *				
8. States clearly that calcium protects the heart but does not lower the potassium, and that a patient given calcium alone remains in danger *				
9. Monitors blood glucose after insulin and glucose, at the intervals local policy sets, and recognises the risk of delayed hypoglycaemia				
10. Ensures continuous cardiac monitoring is in place for a patient being treated for significant hyperkalaemia				
11. Reviews the chart for the contributors: potassium-sparing diuretics, ACE inhibitors and ARBs, potassium supplements, trimethoprim, and any potassium-containing fluid				
12. Stops any potassium-containing infusion running into a patient with hyperkalaemia and escalates *				
13. Repeats the potassium at the interval local policy sets, and recognises that potassium will rebound as the insulin wears off				
14. Documents the result, the ECG, the treatment given, the response and the plan for repeat testing				

The two errors that recur

Two errors recur. The first is treating with calcium and believing the problem is solved. The second is sending a repeat sample and waiting for it while a patient with ECG changes sits untreated. Assessors should ask about both directly, and neither answer can be prompted.

Section 5. Caring for a patient on renal replacement therapy

Completed only where your setting delivers RRT and your employer has authorised you to care for these patients.

If this does not apply to you

If this section is not applicable, write "setting does not deliver RRT" across it and date it. Your assessor then signs the record for sections 1 to 4 and 6 only. Recognising when a patient needs renal replacement therapy is assessed in section 3 and is expected of every practitioner.

Criterion	1	2	3	Date and assessor initials
1. Explains in plain terms how renal replacement therapy removes solute and water, and the difference between diffusion, convection and ultrafiltration				
2. States the difference between intermittent haemodialysis and continuous therapy, and why a haemodynamically unstable patient is usually put on a continuous therapy				
3. Checks and records the prescription before and during the therapy: the modality, the blood flow rate, the fluid removal target, the replacement or dialysate fluid, and the anticoagulation				
4. Checks vascular access before each use: site, dressing, security, and signs of infection, bleeding or dislodgement, and knows that an unsecured line is the most dangerous thing on the circuit *				
5. Knows the immediate actions for accidental disconnection or line dislodgement, including clamping and applying pressure, and can describe them without prompting *				
6. Maintains an accurate hourly and cumulative fluid balance for the circuit, and knows that the machine's figure and the patient's actual balance are not the same thing				
7. Recognises and responds appropriately to the common alarms: access pressure, return pressure, transmembrane pressure, air detector and blood leak, and knows which require immediate escalation				
8. Recognises a clotting circuit early from the pressure trends and escalates before it is lost				
9. Monitors for and escalates the common complications: hypotension, hypothermia, electrolyte disturbance including hypophosphataemia and hypokalaemia, bleeding, infection and clotting				
10. Monitors for the specific risks of the anticoagulation in use, including citrate accumulation where regional citrate is used and bleeding where heparin is used *				
11. Recognises that drug clearance is altered on renal replacement therapy, and checks with pharmacy rather than assuming the usual dose is correct				
12. Keeps the patient warm, positioned, comfortable and informed, and recognises that the therapy is frightening and immobilising				
13. Documents the prescription, the balance, the alarms, the complications and the escalations				

Section 6. Escalation, communication and documentation

Criterion	1	2	3	Date and assessor initials
1. Escalates a new AKI, a rising potassium or a falling urine output within the timeframe local policy sets, and does not wait for the next ward round *				
2. Hands over using SBAR, including the creatinine and its baseline, the potassium, the urine output in mL/kg/h, the fluid balance and the weight trend				
3. Escalates again if the response is inadequate or does not come, and knows the route for doing so, including going above the first responder *				
4. Knows when a patient needs urgent renal or critical care review rather than a routine medical review				
5. Explains to the patient, in plain language, what acute kidney injury is, what is being done and what to expect				
6. Checks for and respects any advance decision, ReSPECT form or treatment escalation plan before escalating, and recognises that renal replacement therapy is not appropriate for every patient				
7. Ensures the AKI is recorded in the discharge summary, with the medicines stopped, the reason, and whether and when they should be restarted and renal function rechecked				
8. Reports an incident where one has occurred, including a nephrotoxic drug given in AKI, a missed AKI alert, an incomplete fluid balance or a delayed escalation				

Assessor note

The commonest harm after discharge is a medicine stopped during AKI that nobody restarted, or one withheld during admission that was restarted without a check on renal function. If the practitioner does not mention the discharge summary unprompted, teach it before signing this section.

Section 7. Underpinning knowledge

Asked verbally by the assessor. Record the substance of the answer, not a tick.

Question	Response noted by assessor
1. What does the nephron actually do, and where in it does most reabsorption happen?	
2. Name four jobs the kidneys do besides making urine.	
3. What is autoregulation, and why does a patient with a low blood pressure stop being able to protect their own kidney perfusion?	
4. Walk me through the renin-angiotensin-aldosterone system and what it does to blood pressure and sodium.	
5. How is acute kidney injury defined and staged?	
6. What is the difference between pre-renal, intrinsic and post-renal AKI, and why does it change what you do?	
7. Which cause of AKI is reversible within hours, and how would you look for it?	
8. Which drugs would you want reviewed in a patient with new AKI, and why each one?	
9. Why is creatinine a poor early marker, and in which patients is it most misleading?	
10. What is a normal urine output in mL/kg/h, and what would you do about half that?	
11. What are the ECG changes of hyperkalaemia, in the order they appear?	
12. Why does calcium not lower the potassium, and what does it do?	
13. What must you monitor after giving insulin and glucose for hyperkalaemia, and for how long?	
14. What are the indications for urgent renal replacement therapy?	
15. What is the difference between intermittent haemodialysis and a continuous therapy, and why would you choose one over the other?	

Section 8. Scenarios

Talked through with your assessor. Record what the practitioner says they would do, and in what order.

Question	Response noted by assessor
1. An 82-year-old admitted with vomiting and diarrhoea has passed 90 mL of urine in six hours and weighs 60 kg. What is their output in mL/kg/h, what do you do, and who do you tell?	
2. A patient's creatinine has risen from a baseline of 78 to 190 in 36 hours. What stage is this, what are your differentials, and what do you do first?	
3. A post-operative patient has not passed urine for eight hours and is uncomfortable in the lower abdomen. What is your first thought and your first action?	
4. The laboratory telephones a potassium of 6.8. The patient is on the ward and feels well. Talk me through the next ten minutes.	
5. A patient with AKI stage 2 is prescribed ibuprofen for back pain and the night nurse has already given a dose. What do you do?	
6. A patient in heart failure with AKI is becoming breathless three hours into a fluid challenge. What do you do, and what is the risk if you continue?	
7. A patient is for a CT with contrast tomorrow. They have an eGFR of 28. What do you do today?	
8. A patient with AKI is being discharged. Their ACE inhibitor, metformin and diuretic were all stopped on admission. What must appear in the discharge summary?	
9. A patient on continuous renal replacement therapy has a rising access pressure alarm and the circuit is darkening. What is happening and what do you do?	

Section 9. Supervised practice log

Record every supervised episode, including those that did not go to plan. Your employer sets the number required.

Date	What you did (fluid assessment, AKI recognition, hyperkalaemia, RRT care, escalation...)	What you would do differently	Level (N/P/I)	Supervisor initials

Range of practice

Competence is only demonstrated across different presentations. Your assessor confirms you have been observed with each of the following, or has assessed it by direct questioning where no such patient arose.

Presentation	Date	Level (N/P/I)	Assessor initials
A patient with new acute kidney injury, staged and escalated			
A patient requiring accurate fluid balance and daily weights over several days			
A patient with a raised potassium			
A patient whose medicines needed review because of renal function			
A patient receiving renal replacement therapy (only where your setting delivers it)			

Reflection and action plan

Write a short reflective account against this course for your revalidation portfolio. The prompts below are a starting point, not a form to fill in.

A patient whose kidney injury was recognised late, or nearly missed. What were the signs, and what changed when someone acted?

Something you now do differently with fluid balance, medicines or escalation because of this course.

A gap you still have, and how you will close it.

Agreed actions

Action	How it will be evidenced	By when

Section 10. Assessment of competence and sign-off

Completed by a competent assessor after direct observation in practice, when every applicable criterion in sections 1 to 6 is at level I and sections 7 and 8 have been answered satisfactorily.

Requirement	Date	Assessor initials
Sections 1, 2, 3, 4 and 6: every criterion observed at level I		
Section 5: completed at level I, or marked not applicable because the setting does not deliver renal replacement therapy		
Section 7: underpinning knowledge answered satisfactorily		
Section 8: scenarios answered satisfactorily, including the hyperkalaemia scenario		
Section 9: supervised practice log and range of practice completed to the number your employer requires		
Reflection and action plan completed with the practitioner		

Scope of this sign-off

Signed off for	Not signed off (separate training and sign-off required)
Renal monitoring, fluid balance and fluid assessment	Vascular access insertion or removal
Recognising, staging and escalating acute kidney injury	Independent management of a renal replacement circuit
Recognising hyperkalaemia and initiating the local response	Peritoneal dialysis exchanges
Nursing care of a patient on renal replacement therapy, where applicable	Prescribing or adjusting any prescription

Assessor declaration

I confirm that the practitioner named in this record has completed The Renal System, Acute Kidney Injury and Renal Replacement Therapy e-learning, has been directly observed in practice, and has demonstrated every applicable criterion at level I. They are assessed as competent to monitor renal function and fluid status, to recognise, stage and escalate acute kidney injury, to recognise hyperkalaemia and initiate the local response, and where applicable to care for a patient receiving renal replacement therapy, independently and within this organisation's policy, subject to ongoing review.

Assessor name, signature and date	Practitioner signature and date	Reassessment due

What this record does not cover

This record does not authorise the practitioner to prescribe, to adjust or withhold a prescription on their own authority, to insert or remove vascular access, to manage a renal replacement circuit independently, or to perform peritoneal dialysis exchanges. Each requires separate training and sign-off, and this record does not replace your employer's own competency framework.

Built on: NMC Code; KDIGO clinical practice guideline for acute kidney injury; NICE NG148 (acute kidney injury: prevention, detection and management) and CG182 (chronic kidney disease); UK Kidney Association clinical practice guidelines, including treatment of acute hyperkalaemia in adults; Royal College of Physicians NEWS2 (2017); NICE NG51 (sepsis). Local policy applies where it differs.